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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,846	03/16/2001	Masahide Tsukamoto	10873.675US01	7077

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EXAMINER

NORRIS, JEREMY C

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/810,846	Applicant(s) TSUKAMOTO ET AL.	
	Examiner Jeremy C. Norris	Art Unit 2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-23 and 26-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-23 and 26-33 is/are allowed.
- 6) ☒ Claim(s) 1-7,9-19,34 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 09 September 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4 March 2003 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7, 9-19, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,323,440 (hereafter Maruyama) in view of US 4,728,753 (hereafter Nakano).

Maruyama discloses, referring to figure 15, a fixture, comprising: a base (43) with an opening in its center portion; a movable pawl (72 on features 73, 74) provided on the base for fixing an electronic component (47); and at least one pair of positioning walls (73,74) for positioning the electronic component by being brought into contact with a top face of the electronic component, wherein the at least one pair of positioning walls are inner wall faces of the base and the moveable pawl has a surface that faces downward (see col. 10, lines 1-10), the surface being brought into contact with the top face of the electronic component so that the electronic component is pressed toward the base.

Maruyama does not specifically state that the surface is substantially parallel with a top face of the electronic component [claim 1]. However, Maruyama does state that the pawls may be shaped akin to the component to be restrained (see col. 10, lines 5-15).

Additionally, Nakano teaches, referring to figure 9, moveable pawls (11a, 12a), restraining an electronic component (2a), wherein the pawls have a flat surface parallel to the component, which contacts and restrains said component. Therefore, it would have been obvious, to one having ordinary skill in the art, at the time of invention, to provide a flat surface on the pawls in the invention of Maruyama, parallel to the flat top surface of the component as taught by Nakano. The motivation for doing so would have been to employ a known shape for the pawls to ensure proper restraint. Moreover, it has

been held that more than a mere change of form is necessary for patentability. *Span-Deck, Inc v. Fab-Con, Inc.* (CA 8, 1982) 215 USPQ 835.

In addition, it is clear that the modified invention of Maruyama discloses that the movable pawl is supported by the base through a thin-wall part having a relatively thin wall thickness so as to be in an elastically displaceable state [claim 2], wherein a wall thickness of the base is thicker than that of the thin-wall part [claim 3], wherein the thin-wall part has across-sectional shape bent or curved in a substantially C-, J-, or V - shaped form [claim 4], wherein the base has a substantially rectangular frame-like planar shape with an opening in its center portion [claim 5], wherein the movable pawl is formed at least on one side of four sides excluding four corners [claim 6], wherein a slope with its lower end located on a side of the opening is formed on an upper portion of the movable pawl [claim 7], wherein an end face of the movable pawl functions as the at least one pair of positioning walls [claim 9], wherein the movable pawl and the at least one pair of positioning walls are formed of an insulating material [claim 10], wherein the base, the movable pawl, and the at least one pair of positioning walls are formed integrally using the same material [claim 11], wherein the movable pawl has a flat surface facing downward, the flat surface being brought into contact with the top face of the electronic component [claim 34].

Similarly, regarding claims 12-19 and 35, Maruyama discloses, referring to figures 15-17, a circuit board (44) with a fixture, comprising; a fixture mounted on a circuit board, for placing an electronic component; and electrodes (16) formed on the

circuit board with the fixture, wherein the fixture comprises a movable pawl (72) for fixing an electronic component (47) by being brought into contact with a top face of the electronic component and at least one pair of positioning walls (73,74) for positioning an electronic component, the at least one pair of positioning walls are inner wall faces of the fixture, and the electrodes are exposed between the at least one pair of positioning walls, the moveable pawl having a surface that faces downward, the surface being brought into contact with the top face of the electronic component so that the electronic component is pressed against the electrodes. Maruyama does not specifically state that the surface is substantially parallel with a top face of the electronic component [claim 12]. However, Maruyama does state that the pawls may be shaped akin to the component to be restrained (see col. 10, lines 5-15). Additionally, Nakano teaches, referring to figure 9, moveable pawls (11a, 12a), restraining an electronic component (2a), wherein the pawls have a flat surface parallel to the component, which contacts and restrains said component. Therefore, it would have been obvious, to one having ordinary skill in the art, at the time of invention, to provide a flat surface on the pawls in the invention of Maruyama, parallel to the flat top surface of the component as taught by Nakano. The motivation for doing so would have been to employ a known shape for the pawls to ensure proper restraint. Moreover, it has been held that more than a mere change of form is necessary for patentability. *Span-Deck, Inc v. Fab-Con, Inc.* (CA 8, 1982) 215 USPQ 835.

Additionally, it is clear that the modified invention of Maruyama discloses that the movable pawl is supported through a thin-wall part having a relatively thin wall thickness

so as to be in an elastically displaceable state [claim 13], wherein the fixture is fixed to the circuit board by adhering thereto by its bottom face, and a wall thickness of the fixture at the bottom face is thicker than that of the thin-wall part [claim 14], wherein the thin-wall part has a cross-sectional shape bent or curved in a substantially C-, J-, or V - shaped form [claim 15], wherein the fixture has a substantially rectangular frame-like planar shape with an opening in its center portion [claim 16], wherein the movable pawl is formed at least on one side of four sides excluding four corners [claim 17], wherein a slope with its lower end located on a side where the electronic component is positioned is formed on an upper portion of the movable pawl [claim 18], wherein the circuit board with a fixture has a first surface provided with the fixture and the electrodes and a second surface opposite to the first surface, and electrodes connected to the electrodes formed on the first surface are formed on the second surface (see figure 13) [claim 19], wherein the movable pawl has a flat surface facing downward, the flat surface being brought into contact with the top face of the electronic component [claim 35]

Response to Arguments

Applicant's arguments with respect to claims 1-7, 9-19, 34 and 35 have been considered but are moot in view of the new ground(s) of rejection. However, the Examiner is compelled to address Applicants' assertion that "Maruyama also fails to disclose surfaces of the movable pawls that are brought into contact with the top surfaces of the electronic components 32, 62 so as to press the electronic components 32, 62 against electrodes or a base". This is clearly a misinterpretation of Maruyama since Maruyama clearly states "the chip parts 62, 68 are held by pressing from above

by the holding pawl 72" (col. 10, lines 65-68) and further describes how this holding presses the chips towards "electrodes 64, 70 provided in copper plate 16" (see col. 11, lines 1-10). Therefore Applicants' traversal on this ground is untenable. As for Applicants' argument that "Maruyama fails to disclose a movable pawl with "a surface that faces downward and is substantially parallel to a top face of the electronic component, the surface being brought into contact with the top face of the electronic component so that the electronic component is pressed toward the base" (electrodes) as required by claims 1 and 12", the Nakano reference as described above addresses the alleged deficiency of Maruyama and thus this argument is moot.

Allowable Subject Matter

Claims 20-23 and 26-33 are allowed.

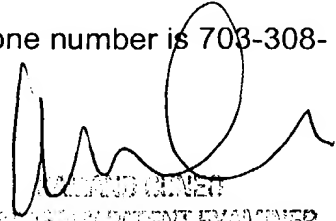
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 703-306-5737. The examiner can normally be reached on Tuesday - Friday, 10am - 7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 703-308-1233. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JCSN



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